MISSOURI. Onservationist SERVING NATURE & YOU



NOTE TO OUR READERS

Conservation Pays

n a recent Saturday, the sun was starting to rise and a light west breeze chilled my face. Spring peepers, in a nearby pond, and whip-poor-wills in the timbered draw were busy welcoming

the new day. Each sunrise spent outdoors in Missouri is special. I had settled into my location, a forest edge bordering a warm-season grass ridge, to listen for turkeys. In the dim light, binoc-

ulars allowed me to spot the silhouette of a raccoon making its way into the timber.

My mind drifted to experiences of the past few months. These experiences clearly documented Missourians' continued passion for the outdoors and their commitment to pass the conservation message on to others. Missouri's citizenled conservation system has a 73-year successful track record. Sustainable and healthy forest, fish and wildlife resources enhance our quality of life and have a positive impact on the state's economy.

Information from the U.S. Fish and Wildlife Service's *National Survey of Fishing, Hunting and Wildlife Associated Recreation* provides insight into the economic impact of the outdoors. Simply stated, forest, fish and wildlife resources are critically important. These resources support approximately 95,000 Missouri jobs and generate more than \$11 billion in economic activity annually.

As an example, in January, communities across our state, such as Clarksville, welcomed visitors to annual Eagle Day events. At these events, it was easy to recognize the public's sincere interest in wildlife and their habitats. Thousands of citizens participated to observe and learn about our national bird along Clarksville's riverfront. The return of bald eagles, including nesting pairs, to Missouri is now a reality. Eagles are just one species pursued by our state's more than 2.2 million wildlife-watchers.

Then there was the March I trout opener—Missouri's unofficial start to the annual tourist season. This year's opener drew anglers of all ages from across the state. As individuals lined the banks of their favorite coldwater stream, the passion, family tra-

ditions and social importance of angling was clearly illustrated. Looking beyond trout, approximately 1.1 million Missouri citizens enjoy our state's spectacular stream, river, lake and pond

shing.

As the first gobble of the morning broke across the ridge, I smiled inside. Within a few weeks, Missouri's spring turkey season will open. Missouri's national leadership in turkey management is no secret.

Taking a glance back in time, an April 1937 report, completed by Rudolf Bennitt and Werner Nagel, revealed fewer than 3,500 wild turkeys in the state—located across 45 southern counties. Through partnership efforts—and much hard work—involving Conservation De-

partment staff, landowners and sportsmen, the turkey population has been changed for the better.

Today, 50 years after our first modern season, Missouri is known as one of the world's premier wild turkey hunting destinations. Despite poor nesting success across many parts of our state the past few years, population estimates are near 600,000 and the annual spring harvest is anticipated to be near 50,000 birds. Tens of thousands of hunters, a portion of Missouri's more than 590,000 hunters, will participate in the upcoming season.

Missouri provides citizens some amazing outdoor experiences. Take time to enjoy and introduce friends to our state's natural resources. I would be interested in hearing about your adventures. Drop me a note and a photo from time to time.

Robert L. Ziehmer, director

OUR MISSION: To protect and manage the fish, forest and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide opportunity for all citizens to use, enjoy and learn about fish, forest and wildlife resources.



FEATURES

8 MDC to Test Quick Draw System

by Jim Low, photos by Noppadol Paothong
The online system will let more people enjoy guaranteed waterfowl hunting while maintaining the "poor line."

IO Crappie by the Numbers

*by Jim Low, photos by David Stonner*Fishing skill + technical savvy = fishing and eating enjoyment.

16 Capturing Peak Moments

by Noppadol Paothong
Patience and study yield the most captivating photos.

50 Years of Missouri Turkey

by Thomas V. Dailey, Ph.D.
Celebrating a wild return and a strong hunting future.

From fishing to turkey hunting to photography, this issue is packed with ideas and opportunities to get outside and discover nature.

Cover: Turkey by Noppadol Paothong

EF 500mm f/5.6 lens f/5.6 • 1/250 sec • ISO 400 Left: Crappie fishing by David Stonner

16−35mm f/2.8 lens f/4.5 • 1/640 sec • ISO 200

NextGEN

This section reports on goals established in *The Next Generation of Conservation*. To read more about this plan, visit *www.MissouriConservation.org/12843*.

- 4 NEWS & EVENTS
- 7 I AM CONSERVATION
- 28 PLANTS & ANIMALS
- 30 PLACES TO GO

MISCELLANY

- 2 Letters
- 5 Ombudsman
- 32 Hunting and Fishing Calendar
- 32 Contributors
- 33 Agent Notes

No Pain, No ... I just finished reading Gainful Gobbling

by David Urich [March], and wanted to tell you I found myself laughing out loud in spots! The story was both touching and humorous, and quite honest and real in its content. Having reached an "advancing" age myself, I quite understand what Mr. Urich was talking about. I appreciated his integrity and self-deprecating humor very much. And the pictures that David Stonner took perfectly complimented the story. Looking forward to locating an "arrogant" turkey myself

Scott Brown, Rolla

I thought the Gainful Gobbling article was absolutely hilarious! While I would never in my

wildest dreams think of getting up at 4 a.m. to gobble at a turkey, I had a wonderful time riding "shotgun" in David Urich's hunt. Having burned a few scones in my time, I can sympathize with his wife, and I especially appreciated Mr. Urich's mathematical formula, as I have discovered several "applied mathematics" formulas of my own over time (the size and expense of the wedding is in inverse proportion to the length and happiness of the marriage, for example). I wish him many more years of turkey hunting, and his wife many more years sleeping right past 4 a.m. Carolyn Erickson, Dixon

GO FISH

I really enjoyed the article Gone Fishing in the recent Conservationist [March]. The pictures and story line were wonderful. I do need you to clear something up, though. The article centered on a Blue Ribbon area on the North Fork of the White River. I understand from reading the article that

no plastic baits are allowed in such areas, yet on Page 21 it appears a trout has been caught on just such a lure. Could you please explain?

Lance Burbridge, Branson

Photographer's note: The lure is a "Near Nuff Sculpin." It has lead eyes, (which is legal) and the rest is dubbing and feathers.—David Stonner, nature photographer

FITTING THANKS

An outstanding story [February]. It is wonderful that the author remembered his father and his longtime friend by taking them on a fishing trip like they took him years before. Most people don't think of doing things for their elders like Mark does. It was a great tribute to the family. Three ponds in one day is quite an accomplishment for anyone, young or old. I enjoy all your stories, but I think this is the best one yet.

Robert Keisker, High Ridge

I just finished reading the fishing story by Mark Goodwin; If more young people would do this for older people, there would be a lot more happiness in the world.

Joy Barton, Black

OUTDOOR DADS

I appreciated the article by Rex Martensen on coon hunting with his family [A Good Night to Go Out; December]. His perspective that coon hunting is a family outdoor activity is one I share. Likewise the article by Jeff Kitchen [First Year Fur Trapper; January] on trapping and sharing the lessons he has learned with his family. The upcoming generation is able to continue our heritage to trap and hunt, fish and respect the outdoors. Fathers spending time with their children in the outdoors. It doesn't get any better than that.

Doren Miller, president, Missouri Trapper's Association

CORRECTION

On the March Letters Page [A Real Gem], a reader thanked David Stonner for his assistance with his daughter's research paper on Lake of the Ozarks. This information was actually provided by fisheries management biologist Greg Stoner.



Reader Photo

BRANCHING OUT

Cathy Sumpter, of Sturgeon, captured this image of a Northern fence lizard last April when she and her family were mushroom hunting. "My husband hunts everything there is to hunt," says Sumpter. She and her two daughters "go with him to arrowhead, shed [antlers] and mushroom hunt. My daughters get most excited about the mushroom hunting because it's like an Easter egg hunt to them."



DEPARTMENT HEADQUARTERS

Phone: 573-751-4115 Address: PO Box 180,

Jefferson City 65102-0180

REGIONAL OFFICES

Southeast/Cape Girardeau: 573-290-5730 Central/Columbia: 573-884-6861 Kansas City: 816-655-6250 Northeast/Kirksville: 660-785-2420 Southwest/Springfield: 417-895-6880 Northwest/St. Joseph: 816-271-3100

St. Louis: 636-441-4554

Ozark/West Plains: 417-256-7161

SUBSCRIPTIONS

Phone: 573-522-4115, ext. 3856 or 3249

Address: Circulation, PO Box 180, Jefferson City 65102-0180

E-mail: Subscriptions@mdc.mo.gov

Conservationist online services: Subscribe to the magazine, update your mailing address, or sign up to receive an e-mail when the latest issue is available online at www.MissouriConservation.org/15287

Cost of subscriptions: Free to Missouri households

Out of State \$7 per year
Out of Country \$10 per year

OMBUDSMAN QUESTIONS

Phone: 573-522-4115, ext. 3848 Address: Ombudsman, PO Box 180, Jefferson City 65102-0180 E-mail: Ombudsman@mdc.mo.gov

EDITORIAL COMMENTS

Phone: 573-522-4115, ext. 3245 or 3847
Address: Magazine Editor, PO Box 180,
Jefferson City 65102-0180
E-mail: Magazine@mdc.mo.gov

READER PHOTO SUBMISSIONS

Address: Missouri Conservationist, Reader Photo, PO Box 180, Jefferson City 65102-0180

E-mail: Readerphoto@mdc.mo.gov

Don't Get Scammed—Do not give any information to anyone who comes to your door soliciting *Conservationist* subscriptions. It could be a scam. Get as much information as possible and then contact your regional Missouri Department of Conservation office, police department or the Missouri Consumer Protection Hotline at 1-800-392-8222.

MDC Online

Discover more about nature and the outdoors through these sites.

Blog: www.MissouriConservation.org/17526 Facebook: www.facebook.com/MDConline Flickr: www.MissouriConservation.org/20010 Kid's site: www.XplorMo.org Missouri Conservationist Web site: www.MissouriConservation.org/3939

Six times a year we'll bring you eye-popping art, photos and stories about Missouri's coolest critters, niftiest natural places, liveliest outdoor activities and people who've made a living in the wild. Come outside with us and XPLOR! Ages: 7-12 Missouri residents: FREE (one subscription per household) Out of state: \$5 per year Out of country: \$8 per year A guardian's name and address is required with the subscription. SSRUP www.XplorMo.org 573-522-4115, ext. 3856 or 3249

Conservationist

GOVERNOR Jeremiah W. "Jay" Nixon

THE CONSERVATION COMMISSION

Don C. Bedell Don R. Johnson William F. "Chip" McGeehan Becky L. Plattner

Director Robert L. Ziehmer
Deputy Director Thomas A. Draper
Deputy Director Tim D. Ripperger
General Counsel Tracy E. McGinnis
Internal Auditor Nancy R. Dubbert

DIVISION CHIEFS

Administrative Services Carter Campbell **Design and Development** William F. Lueckenhoff

Fisheries William M. Turner Forestry Lisa G. Allen

Human Resources Thomas Neubauer Outreach & Education Lorna Domke Private Land Services William D. McGuire

Protection Larry D. Yamnitz
Resource Science Ronald J. Dent
Wildlife DeeCee Darrow

CONSERVATIONIST STAFF

Editor In Chief Ara Clark

Managing Editor Nichole LeClair Terrill

Art Director Cliff White Writer/Editor Tom Cwynar Staff Writer Bonnie Chasteen Staff Writer Iim Low

Photographer Noppadol Paothong Photographer David Stonner

Designer Stephanie Thurber
Artist Dave Besenger
Artist Mark Raithel

Circulation Laura Scheuler

The Missouri Conservationist (ISSN 0026-6515) is the official monthly publication of the Missouri Department of Conservation, 2901 West Truman Boulevard, Jefferson City, MO (Mailing address: PO Box 180, Jefferson City, MO 65102.) Subscription free to adult Missouri residents; out of state \$7 per year; out of country \$10 per year. Notification of address change must include both old and new address (send mailing label with the subscriber number on it) with 60-day notice. Preferred periodical postage paid at Jefferson City, Mo., and at additional entry offices. Postmaster: Send correspondence to Circulation, PO Box 180, Jefferson City, MO 65102-0180. Phone: 573-522-4115, ext. 3855 or 3249. Copyright © 2010 by the Conservation Commission of the State of Missouri.

Equal opportunity to participate in and benefit from programs of the Missouri Department of Conservation is available to all individuals without regard to their race, color, national origin, sex, age or disability. Questions should be directed to the Department of Conservation, PO Box 180, Jefferson City, MO 65102, 573-751-4115 (voice) or 800-735-2966 (TTY), or to the U.S. Fish and Wildlife Service Division of Federal Assistance, 4401 N. Fairfax Drive, Mail Stop: MBSP-4020, Arlington, VA 22203.

Printed with soy ink

NEWS & EVENTS by Jim Low



Children in Nature Challenge

Gov. Jay Nixon recently issued an executive order establishing the Children in Nature Challenge and directing state agencies to promote efforts to "enhance children's education about nature and increase children's opportunities to personally experience nature and the outdoors."

Executive Order 10–18 recognizes the importance of nature-based education to help build a lifelong understanding and concern for our natural resources. It specifically mentions the Conservation Department's Discover Nature Schools program for K-12 that helps students get outside to experience hands-on learning in nature.

The governor challenges Missouri communities to use the state programs in building their own local efforts. The departments of Conservation and Natural Resources will work with other agencies to develop a way to recognize those successful community efforts.

For more about Discover Nature Schools, visit **www.MissouriConservation.org/15642**.

Missouri Documents First CWD

The Conservation Department is working with other state and federal agencies to learn how chronic wasting disease (CWD) got into the Show-Me State and to keep the disease from spreading.

Missouri's first documented case of CWD involves one captive white-tailed deer at a high-fence hunting preserve in Linn County. The positive test came in February as part of routine monitoring. In response, state agencies activated a contingency

plan that has been in place since 2003. The first action under that plan was placing the Linn County hunting preserve under quarantine. The next step is to trace the infection back to its source.

The Conservation Department is collecting free-ranging white-tailed deer from the area around the hunting preserve. In addition, to deer and elk within the preserve are being tested by the Missouri Department of Agriculture for CWD. The outcome of these tests will

determine further actions.

CWD is a degenerative brain disease that affects deer, elk and moose. No evidence suggests that CWD can infect humans or livestock. For more information, visit www.MissouriConservation. ora/16606.

Missouri joins Colorado, Illinois, Kansas, Michigan, Minnesota, Montana, Nebraska, New Mexico, New York, Oklahoma, South Dakota, Utah, Virginia, West Virginia, Wisconsin and Wyoming, plus the Canadian provinces of Alberta and Saskatchewan, all of which have found CWD in captive deer or elk.

The Conservation Department has been monitoring the state's deer herd for CWD since 2001. The most recent round of testing has failed to find any CWD-infected deer in wild whitetails. The Conservation Department continues to conduct targeted testing of sick deer. If you see a sick deer, report it to the nearest Conservation Department office (Page 3).

First Record Fish of 2010

A gigging trip on the Niangua River produced Missouri's first record fish of 2010. Fifteen-yearold Joshua Lee Vance of Bolivar gigged the 4-pound, 5-ounce white sucker Jan. 19. The fish was the first of its species ever entered in the alternative methods category.

The Conservation Department keeps fishing records in two categories—pole and line and alternative methods. Alternative-methods records include fish taken by snagging, trotlines, limb lines, bank lines, spearing, gigging or archery. The pole-and-line category is for fish hooked in the mouth with a hand-held line. The white sucker pole-and-line record is 4 pounds, 8 ounces.

A surprising number of state fishing records have never been filled. These "open records" include six for pole and line and 23 for alternative methods. Open pole-and-line records include white catfish, spotted sucker and alligator gar. Open alternative-methods records include white and yellow bass, muskellunge, shovelnose sturgeon and shorthead redhorse. Some alternative methods are not legal for some fish species. For example, trout may not be taken by gigging.

A list of state fishing records and information about applying for records are available at www.MissouriConservation.org/69. Visit www. **MissouriConservation.org/71** for information about the Master Angler Program, which provides recognition for catching big fish that are not state records.

Missouri Gets \$21.8 Million

The U.S. Fish and Wildlife Service recently announced final apportionments of federal aid to wildlife and sport fish restoration funds for Fiscal Year 2010 totaling \$862 million. Missouri's share is \$12.6 million for wildlife and \$9.2 million for fisheries.

The Federal Aid in Wildlife Restoration Act of 1937 (also known as the Pittman-Robertson Act) provides for excise taxes on sporting arms and ammunition, pistols and certain archery equip-

ment. The Federal Aid in Sport Fish Restoration Act of 1951 (also called the Dingell-Johnson Act) provides for excise taxes on fishing equipment. The sport-fish restoration fund was augmented by the Wallop-Breaux Act of 1984, putting excise taxes on motor-boat and small-engine fuels.

Since these two programs' inception, Missouri has received approximately \$149 million in federal wildlife restoration funds and \$144 million in federal sport fish restoration funds. Both funds and the taxes that feed them were established at the urging of hunters and anglers.

Current River State Park Turkey Hunt

The print version of the 2010 Spring Turkey Hunting Regulations and Information booklet lists the

dates of a managed hunt at Current River State Park as April 20 through May 2. The correct dates are April 29 through May 2. The print version of the publication had gone to press before the error was detected. However, the information has been corrected in the online version at www. MissouriConservation.org/hunt/turkey/sprturk/managed.htm.

Big Fun Planned on the Big Muddy

If you have ever been out on the Missouri River, you know what an epic place it is. If you haven't, you can discover the Show-Me State's biggest, most amazing body of water at several upcoming events.

(continued on Page 6)



Ask the Ombudsman

■ I've heard that the native ■ prairie grass, buffalo grass, can be used as a turf grass in home landscaping. Is it a good choice for Missouri homeowners?

Buffalo grass can be a good choice for the right site. It

performs best in full sun on a well-drained, loamy soil. Spreading by runners and growing naturally to a height of 4 to 8 inches, it may not require mowing in some applications. It is more drought-tolerant than most lawn grasses and will compete well on dry sites with a southern exposure. Buffalo grass is a gray-green color during its growing season and is straw-colored from November through March. It can be difficult to develop a pure (weed-free) stand of buffalo grass in Missouri, especially in areas of greater soil moisture. An excellent reference on buffalo grass lawns can be found online at www.ksre.ksu.edu/library/hort2/mf658.pdf.

Which shotgun gauges are legal for use in turkey hunting?

■ The Missouri *Wildlife Code* restricts the gauge of shotgun for any hunting to not larger than 10 gauge.

There are no further restrictions for turkey hunting, so even .410 gauge shotguns are allowed. We have not created any minimum gauge requirements, preferring to allow hunters to choose the shotgun that is appropriate to their skill level and their desired degree of challenge. The same logic is used in the deer hunting regulations, in that any centerfire, expanding-type, pistol or rifle bullet is allowed.



Ombudsman Tim Smith will respond to your questions, suggestions or complaints concerning Department of Conservation programs. Write him at PO Box 180, Jefferson City, MO 65102-0180, call him at 573-522-4115, ext. 3848, or e-mail him at *Ombudsman@mdc.mo.gov*.

On June 19, the Missouri River Communities Network (MRCN) is sponsoring a Canoe for Clean Water! Race, Float, and Festival. Join the Clean Water 50, a canoe or kayak marathon from Glasgow to Katfish Katy's Campground in Huntsdale. If you prefer a short sprint or a leisurely float, take part in the Clean Water 15, a 15-mile paddle from Boonville to Katfish Katy's. Both races are pledge-type fundraisers for MRCN, with solo and tandem divisions for men, women and youth, plus mixed tandem. Shuttle

service is available for the Clean Water 15.

If paddling isn't your thing, you can just enjoy the river festival at Katfish Katy's with live music, educational booths and great local food and drink. Those who arrive at the festival by boat or bicycle will receive a free beverage. This is Father's Day weekend, which makes the event a fabulous opportunity to share an adventure with your dad or your kids. To learn more, visit www. moriver.org/race/race.html.

Missouri River Relief has a full schedule of

river cleanups this year, stretching from March through October and from Yankton, S.D., to St. Louis. Work gloves, trash bags, lunch and a boat ride all are provided. You provide the muscle to clean up the river. Learn details and sign up for cleanups at **www.riverrelief.org/upcoming/**.

The first "Race to the Dome" canoe and kayak race July 3 will have racers paddling 16 miles from Hartsburg Access to Noren Access in Jefferson City. Details are available at **www.racetothedome.ora**. This race is a fundraiser for Missouri River Relief.

The Greenway Network will hold two races Sept. 4 and 5. The Race for the Rivers is a staged race of 65 miles from Washington to the confluence with the Mississippi River. It is for serious paddlers. The Clean Water Challenge is for the less-experienced racers and recreational paddlers. It is a nonstop, friendly competition starting in Weldon Spring and ending at Race for the Rivers Festival in Saint Charles' Frontier Park.

The festival features food, live music and information booths. Race pledges support Greenway Network's various clean water initiatives. For more information, visit racefortherivers. org/schedule.php, or racefortherivers.org/ participants.php.

Donations Top 2 Million Pounds

Missouri hunters passed the 2-million pound mark in charitable meat donations during the 2009–2010 hunting season. Hunters have been donating venison to food pantries and other charities since 1992.

The program, started by the Columbia Area Archers and the St. Louis Longbeards Chapter of the National Wild Turkey Federation in 1992, grew rapidly after the Conservation Federation of Missouri and the Conservation Department adopted it. Now Share the Harvest nets more than 200,000 pounds of venison yearly.

This year's total of more than 213,000 pounds pushed the lifetime total of donations through the program to over 2 million pounds. Donations from the Conservation Department and other sponsors help pay for processing whole deer donated to the program, making donations need for thousands of hunters. The result is lean, high-protein food for needy Missourians.

For more information, visit **www.Missouri**

Conservation.org/9032 or call 573-634-2322.



Seven-year-old William Eggert of Salem used dough bait to catch this 6-pound, 9-ounce lunker rainbow trout on opening day of the trout park season at Montauk State Park. He is pictured with his father, left, and Conservation Department Director Robert L. Ziehmer.

Trout Season Starts With a Bang

Missouri is a great place to fish—trout fishing is no exception. The 2010 trout park season started this year with a total of 7,380 tags sold at the four trout parks on the March 1 season opener. Governor Jay Nixon fired the gun to start the fishing activities at Montauk Fish Hatchery/ Trout Park inside Montauk State Park. The largest catch of the opener was at Montauk, weighing in at 8 pounds, 14 ounces.

Trout fishing enriches Missouri's economy. Here are some figures for permit and tag sales:

- Total Tag and Trout Permit Sale Revenues for 2007—\$1,940,835
- Total Tag and Trout Permit Sale Revenues for 2008—\$1,851,818
- Trout Park Tag Sales for 2004–2008—\$2,060,000

The regular season at trout parks runs through Oct. 31. Trout season in Missouri is a cooperative effort of the Department of Conservation, which operates the hatcheries and stocks the streams with trout, and the Department of Natural Resources, which manages state parks, and The James Foundation, which manages Maramec Spring Park. To learn more about trout fishing in Missouri, visit www.MissouriConservation.org/7248.

"I AM CONSERVATION"



Baseball to Birds, a Lifetime Scouting by Chris Canipe



In 1972, while working the sports desk at the Columbia Tribune, an editor asked Bill Clark if he would cover a birding event.

"I knew three kinds of birds at the time: the Thanksgiving Turkey, the Christmas Goose and the Kentucky Fried Chicken," Clark says.

But the story he wrote—a write-up of Missouri Audubon Society's Christmas Bird Count—got an entire page.

"I was hooked," Clark says.

Clark, 77, is retired from a 36-year scouting career that included 18 years with the Cincinnati Reds and 11 runAtlanta Braves. Early morning bird watching, he says, became a "pop-off valve" while working a stressful job that took him all over the world.

"I'd get back to the motel at 11 a.m. and be ready to go back to the ballpark."

Every Wednesday, as they have for the last four years, Clark and a handful of friends go birding. Clark says he's been to a third of the roughly 900 sites in the state that are either owned or managed by the Department of Conservation. His participation has been remarkably consistent.

"I haven't missed in 203 straight weeks."

Each week, the group reports their sightings through the Conservation Area Checklist Project or CACHE—a cooperative agreement between the Audubon Society and the Missouri Department of Conservation. The project, online at www.mobirds.org, provides the Department with bird population data year-round.

There are rare and endangered birds to be seen in Missouri, but that's not what Clark likes about birding. "I don't chase the rarities," he says. "To me it's just so important that all of these sites get some attention."

For Clark, the experience of seeing a bird like the Arctic tern is to observe the world at work. "To be a part of something like migration," Clark says. "How can a bird ning the international program for the ifly from the Arctic Circle to Argentina twice a year? Amazing." A

MDC to Test Quick Draw System

The online system will let more people enjoy guaranteed waterfowl hunting while maintaining the "poor line."

by JIM LOW, photos by NOPPADOL PAOTHONG

"We think Quick
Draw will make
hunting at our
wetland areas
more practical
for more
hunters," says
Wildlife Division
Chief DeeCee
Darrow.

MISSOURI HUNTERS WILL take part in a pilot program this fall to make waterfowl hunting at three state-owned wetland areas less of a gamble.

The Missouri Department of Conservation will test an online drawing system called Quick Draw. The system is intended to change the way daily drawings are conducted to assign waterfowl hunting opportunities at state wetland areas. The new system still will include a predraw portion (Quick Draw) and a daily drawing for remaining open slots.



The Department will test Quick Draw at Eagle Bluffs, Grand Pass and Otter Slough conservation areas to determine whether the online system enhances convenience and hunter participation. Depending on how well it works, the system might be modified and expanded to other state-managed wetland areas in future years.

During this year's trial run, Missouri residents will enter online drawings for hunting slots twice a week instead of having to go to the three conservation areas for the daily draw. Hunters entering the drawing through Quick Draw can apply to hunt at one area per day. The system will not limit the number of days for which hunters can apply, or the number of days they can hunt if they are drawn.

A drawing on Monday of each week will assign hunting slots for the following Friday through Monday. A drawing each Thursday will assign slots for the following Tuesday through Thursday. The Quick Draw system will accept applications a few days prior to each drawing.

The online drawings will assign 80 percent of hunting slots each day. The remaining 20 percent of slots will be assigned in a drawing at each wetland area the morning of the hunt. This arrangement—commonly called the "poor line" drawing—is part of the current drawing system.

Wildlife Division Chief DeeCee Darrow said the trial is part of a larger effort to re-examine how the Conservation Department does business and to use every technological means at its disposal to improve services.

"Our current daily drawing system for assigning waterfowl hunting opportunities has been around for a long time," says Darrow. "However, it does have some drawbacks. We had no way to address those shortcomings in the days before the Internet. We think Quick Draw will make hunting at our wetland areas more practical for more hunters."

The current drawing system assigns hunting opportunities in two ways. Each September, Missouri residents apply for hunting reservations at wetland areas. Those reservations can be from late October into January. The reservation system assigns half the hunting slots available at each wetland area each day. The other half are assigned in drawings—the so-

called "poor line"—held early each morning at each wetland area. The three areas where Quick Draw is being tested will not be included in the reservation system this year.

Daily "poor line" drawings allow Missouri residents who do not have reservations and nonresidents to drive to the wetland areas of their choice for a chance at drawing one of the unreserved hunting slots. This feature is retained under Quick Draw.

Having a reservation under the current system is not always good for reservation holders. Reservation dates are locked in weeks or months in advance, and they do not always coincide with those days when large numbers of ducks and geese are present. Under the present system, the only way to concentrate your hunting efforts on the best days of the year is to stand in the "poor line." The new system gives hunters more flexibility by letting them try for guaranteed hunting slots on the hottest hunting days of the year.

Driving to wetland areas to stand in the "poor line" is a costly gamble for those who live far from their favorite hunting areas or who must take a day of vacation for a hunt. It also creates a quandary for parents who want to hunt with their children but hesitate to take them out of school without any assurance they will get to hunt.

Quick Draw's twice-weekly drawings will increase the number of hunters who have guaranteed slots when they arrive at wetland areas. It also will enable hunters to focus their efforts on the best hunting days.

Under Quick Draw, the computer drawing will determine the order in which successful applicants get to select hunting spots. It also will determine where successful hunters in the "poor line" fit in the selection of hunting spots. On any given day, the No. 1 spot can be in either the Quick Draw or "poor-line" portion of the draw.

Darrow said the new system will reduce the number of hunters turned away from wetland areas on site each morning. Furthermore, she expects it to speed up the process of getting hunters to their hunting spots.

"We think hunters will find a lot to like about this system," says Darrow. "We know from past surveys that lack of time is one factor that pre-



vents people from enjoying outdoor activities. This will help Missourians make better use of their time."

Darrow noted that high fuel prices make fruitless trips to distant hunting areas expensive. Quick Draw will save waterfowl hunters money.

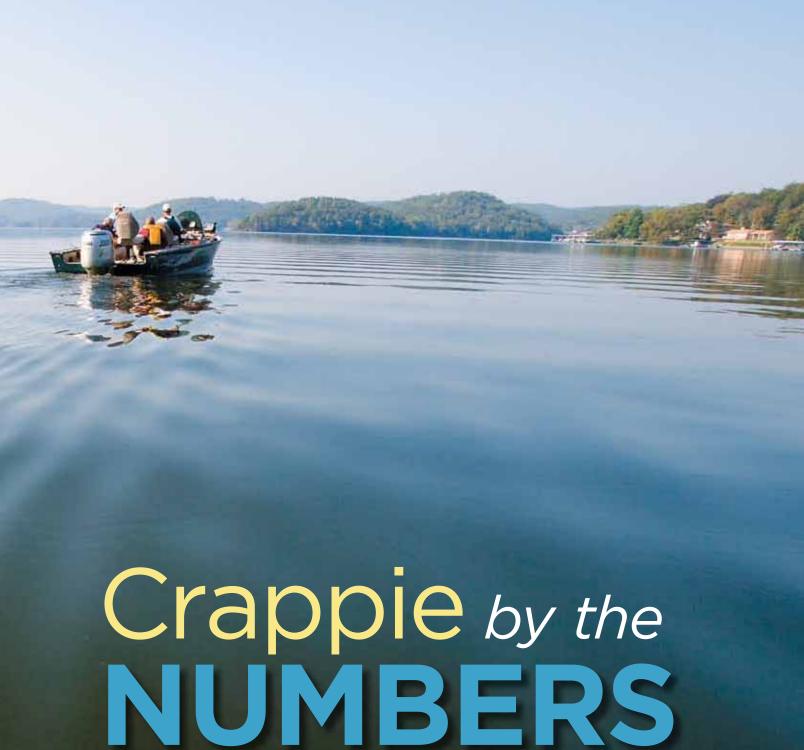
"No system can please everyone," says Darrow, but we hope this new arrangement will make it easier and more affordable for people to take advantage of waterfowl hunting at state wetlands. If it lets more people enjoy hunting, it will be a success."

Darrow said the Conservation Department is interested in finding out what hunters think of Quick Draw, both before and after this year's trial. She said the new system is still in development, with time for fine-tuning to make the test run as convenient as possible for hunters and as useful as possible in post-test evaluation.

Hunters interested in providing suggestions about Quick Draw can contact the nearest Conservation Department office (Page 3) or send written comments to Wildlife Division, Missouri Department of Conservation, PO Box 180, Jefferson City, MO 65102-0180. ▲

"No system can please everyone," says Darrow, "but we hope this new arrangement will make it easier and more affordable for people to take advantage of waterfowl hunting at state wetlands. If it lets more people enjoy hunting, it will be a success."





Fishing skill + technical savvy = fishing and eating enjoyment.

by JIM LOW, photos by DAVID STONNER

I LOVE FISHING.

The only warm-season activity that comes close to the fun of finding a hot spot and catching one fish after another is taking home a mess of fish and savoring their fresh-caught succulence.

Unfortunately, I lack the methodical bent necessary to excel at most types of fishing. I can walk up a small stream—where all the fish are confined within casting distance—and catch bass and sunfish all day. But when it comes to finding the precise location and depth on a big lake where crappie are inhaling minnows on a particular day, I am as lost as a pocket knife dropped in a 40,000-acre reservoir. Thank goodness for global positioning systems and guys like Darrell Shirk.

I acquired Darrell as a fishing friend when my daughter and his son married. Darrell and

at best. Darrell's fascination with the world's most delectable sunfish, combined with Brett's fascination with technology, recently enabled me to acquire the main ingredient for a fantastic crappie dinner.

I had been itching to try finding fish with a global positioning system ever since discovering that the Conservation Department has map coordinates for hundreds of fish-attracting structures. I own a hand-held GPS unit that I was convinced would get me close to the magic spots. However, Brett has a much more sophisticated model that he normally uses for road trips.

my son-in-law Brett's enthusiasm for crappie fishing was a double stroke of good luck for my family, because I am a mediocre fishing guide

Between the two of us, I figured we ought to be able to motor from one fish attractor to another until we found one where the fish were biting. Once there, I felt confident Darrell's crappie expertise could put fish in the boat.

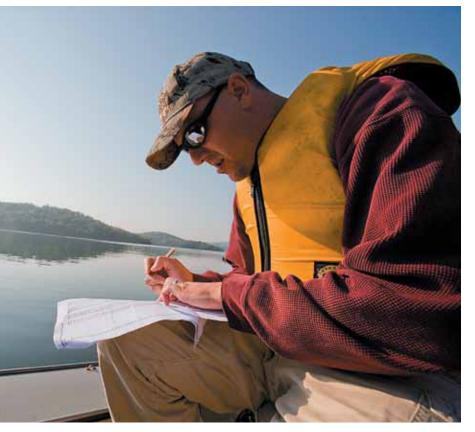
Fisheries Management Biologist Greg Stoner agreed to ferry us around Lake of the Ozarks one September day as we put technology to the test. We had great weather for the project, sunny and 62 degrees at 7 a.m., when we arrived at the boat ramp on the Niangua Arm.

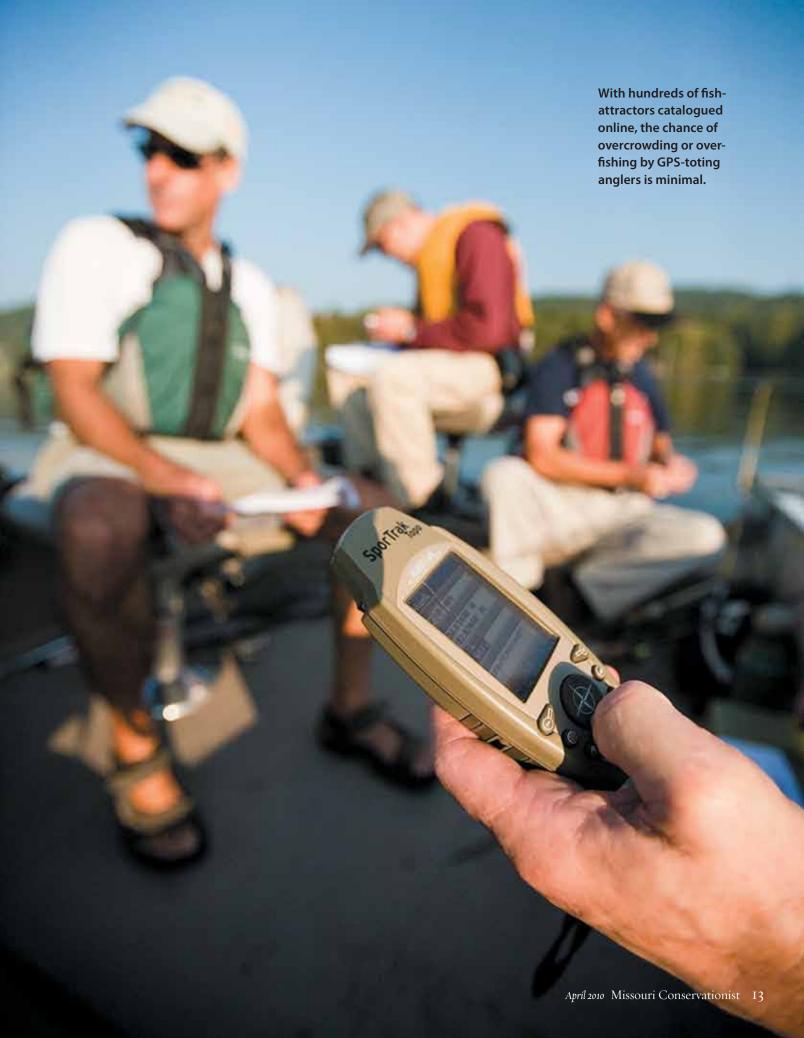
Greg mapped the location of Lake of the Ozarks' crappie hotspots, so we asked him to keep mum if we had trouble finding the places we were seeking. His job was simply to point the boat where we directed.

We hit the water with GPS units and several sheets of paper with map coordinates of fishattractors. These range from piles of cedar trees and rows of stumps to plastic contraptions. All of them do the same thing—provide surfaces where algae and other food organisms can grow. This attracts small fish and invertebrates that eat the tiny stuff. The small fish attract larger fish, like crappie, bass, bluegills, catfish and walleve.

In the days before GPS, fish attractors were marked with buoys or signs on shore. You had to motor around to find them. Later, the U.S. Army Corps of Engineers began publishing maps showing the approximate locations to make the process easier. Others, including the Conservation Department, got in the act later on, making crappie fishing much easier.

In the days before GPS, fish attractors were marked with buoys or signs on shore. Now with the use of GPS, finding crappie hotspots becomes much easier.





ANCHORED BUT NOT IMMOVABLE

Stoner notes that even though fish attractors are weighed down with enough concrete to keep them from drifting away, they are not immoveable. An angler whose anchor accidentally snags one of the structures can tow it off the original location. If you arrive at a GPS site and can't find the structure, circle the area with one eye on your depth finder, or try fan-casting to locate the brush.

MDC fisheries biologists and Army Corps of Engineers employees build fish habitat in Table Rock Lake. Many provide prime fishing opportunities.

Even with a map, however, you had to find your way around tens of thousands of acres of water to find fish attractors. This can be harder than you might think, particularly for someone like me, who is not familiar with the labyrinth of arms and coves that huge reservoirs present at water level.

My hand-held GPS unit turned what otherwise would have been a serious challenge into child's play. I programmed the unit with map coordinates of several fish attractors within easy range of the boat ramp. When I selected one of the points, a heavy black line appeared on the

screen, showing a direct path to the fish attractor. All we had to do to find fishing heaven was keep the boat pointed in the direction indicated on the screen.

Brett's unit added verbal instructions to the visual cues. If not for the need to steer around islands and other obstacles, his unit would have allowed us to get where we were going blindfolded.

When we arrived at our first destination, we discovered that Brett's unit was more precise than mine. It told us when we were directly over the designated map coordinates. With my little unit's screen, we seemed to be on target anywhere within 50 yards of the precise spot. While that is not great, it would have been close enough to allow us to scan the bottom with the boat's depth finder to locate fish structures.

Greg threw out an orange marker buoy when Brett gave the word, and we commenced fishing. Within a few minutes, Brett caught two keeper crappie. Darrell caught a few little ones. I got skunked. That isn't surprising, considering my



lack of experience. I was thrilled all the same.

"It's so easy, it's borderline criminal," says Stoner, grinning at our success. Nothing pleases a fisheries biologist like seeing anglers enjoying the fruits of his or her labor.

We tried a few other spots that morning, and although our success varied from place to place, the ease of finding fish attractors did not. At each spot, Greg's depth finder confirmed the presence of a structure where Brett's GPS said it should be.

Looking back on it, I suppose more tech-savvy anglers would consider my approach to this project unnecessarily complicated. I downloaded long lists of map coordinates for fish attractors on my home computer, printed them out and then entered them in my GPS unit by hand. Smart phones can download map coordinates while on the water, using free software from www.easygps. com, then feed them into a GPS application and take you to each spot.

With hundreds of fish-attractors catalogued online, the chance of overcrowding or overfishing by GPS-toting anglers is minimal. And, should you find all the recorded spots occupied, you can always go off the grid, find your own spots and create your own map of secret fishing hot spots.

I readily admit to being something of a technological curmudgeon. In my opinion, technology diminishes outdoor enjoyment more often than it enhances it. So it's gratifying to be able to whole-heartedly endorse this particular piece of the new millennium. Fishing by the numbers rocks!

Now, if someone would just invent an electronic gadget that makes fish bite. ▲

WHERE TO GO ONLINE

The MDC GIS Mapping Service (*mdcgis.mdc.mo.gov/website/default_edits_091608.asp*) has data for fish attractors at Lake of the Ozarks, Bull Shoals, Fellows, Norfork, Pomme de Terre, Stockton, Table Rock, Truman and Wappapello lakes. Web pages that show fish attractor locations without need for GPS technology include *mdc4.mdc.mo.gov/documents/600.pdf* and *mdc4.mdc.mo.gov/Documents/19680.pdf*.



Patience and study yield the most captivating photos. by NOPPADOL PAOTHONG

ave you wondered why some photographs in books or magazines are so captivating and grab your attention more than others? I asked myself the same question for many years before I realized what had been missing in my photographs—peak moment.

When I was a journalism student, I attended several photography seminars hosted by some of the best sports photographers in the country, trying to learn how they captured such captivating images. Many said that the most memorable images are those where a photographer truly captured the peak of the moment—the moment

PAINTED BUNTING ▶

Painted buntings are one of the most colorful birds in Missouri. They regularly migrate to southwest Missouri during summer. Those times are also a mating season when males sing their hearts out to attract females in the area. Photographing songbirds during these times offers one of the most unique photography opportunities since all males try to show off their best singing skills.

EF800mm f/5.6 lens • f/5.6 • 1/1000 sec • ISO 400



when a pole vaulter crested the bar or a wide receiver in a football game reached out to catch a passing ball at the tip of his fingers.

It took a while for me to understand what that meant and apply it to my photography. I understood later that it didn't simply mean capturing good action shots. A photographer should not only pay attention to details, but also participate in the moment or the motion of a subject. Once I began applying this concept to my photography, my images improved.

Capturing peak moments is not just for action photos. You can apply the same theory to any photography, including nature photography. To successfully implement this concept, you need to learn to anticipate the moment. Do some research on your subject. Try to understand its habits and behaviors. Be patient and observe. By doing that, by participating in the moment, you can expect what's going to happen next. Being able to expect and predict behaviors, you will be able to capture the peak of the moment.

Picture the Moment

Imagine that you have less than a second to capture an animal's unique behavior or the expression on its face. The only way you can successfully do this is to be prepared not only physically, but mentally—be ready before the moment arrives.

Whenever I am out in a field working on my subject, I always practice this idea. I observe and understand my subject enough that I participate in the moment and anticipate for the next move. For example, instead of photographing a bird perched in a tree or a deer just standing in a field, I would watch and wait. I would wait until the bird started singing or the deer began running or leaped into the air.

Visualize a green heron wading in the water. Although the portrait of the bird is beautiful, it isn't a very interesting image. I watch it and wait until the bird strikes a fish; I capture the struggle as it tries to lift the fish out of the water.

Because I waited and anticipated the next move of these subjects, I was able to capture their peak moment. I am not just trying to take pictures; I am trying to capture the moment in time. This not only makes images more interesting and captivating, but also captures the spirit of the animals.

The joy of nature photography is to share the incredible moments of nature and wildlife you have witnessed with someone else. As you become more confident in your photography, apply the idea of capturing the peak moment. With a little practice and patience, you will be rewarded with once-in-a-lifetime images to share. ▲









▲ GREEN HERON

Watching a green heron wading in a pool for a few hours can be daunting, especially when you have to watch its movement intensively so not to miss a split-second action. But my patience paid off when this one finally struck a sunfish and lifted it out of the water. The bird flew off with the fish within a few seconds, but I successfully captured its peak moment. Having camera settings, including exposure, properly set up prior to taking a picture will ease any problems you may encounter during this moment.

EF800mm f/5.6 lens • f/8 • 1/200 sec • ISO 1000

■ BLACK BEAR

Photographing wild black bear in Missouri is not only exciting but also requires a lot of patience and nerve. I spent about a month photographing a family of black bear from my photo blind in Forsyth, and I was able to capture this young black bear exploring the woods early in the morning rain.

EF500mm f/4 lens • f/5.6 • 1/60 sec • ISO 800



▲ AMERICAN WHITE PELICAN

I successfully captured an American pelican skidding on the surface of the Mississippi River as it was landing. To achieve this, I watched its movement carefully as it circled the area, and I kept my focus while panning my camera on the bird. A fast shutter speed also helped to freeze the action.

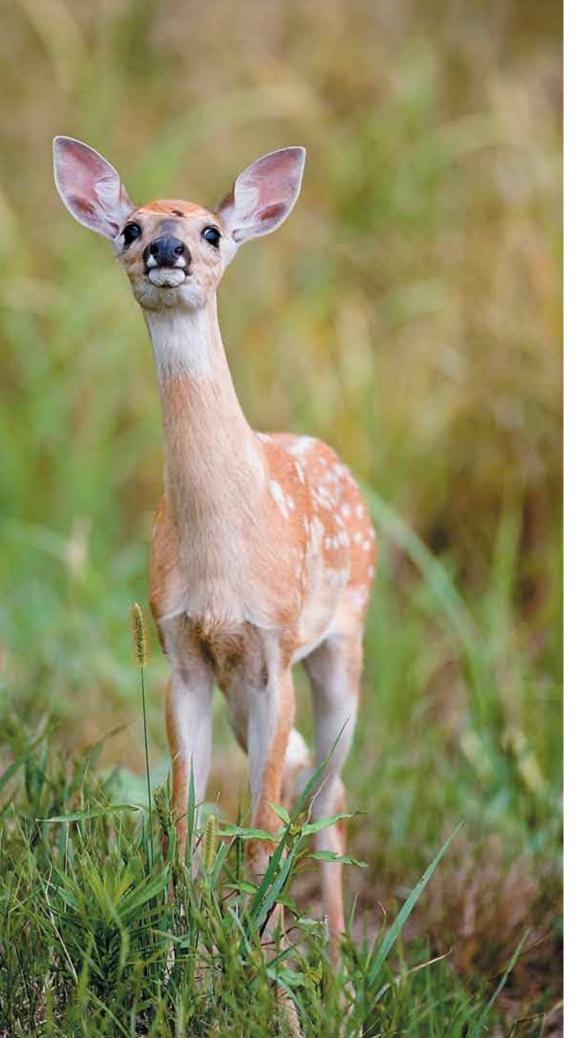
EF600mm f/4 lens • f/8 1/1000 sec • ISO 400



▲ RIVER OTTER

A semi-aquatic animal like a river otter can be elusive and difficult to photograph because it spends most of the time in and under water. After spending several hours watching a family of otter fishing in icy water, I started to notice their feeding behaviors. Then I prepared myself mentally to be ready for a split-second chance of capturing a river otter's fishing behavior. I finally captured one otter emerging from underwater with his prize, a gizzard shad.

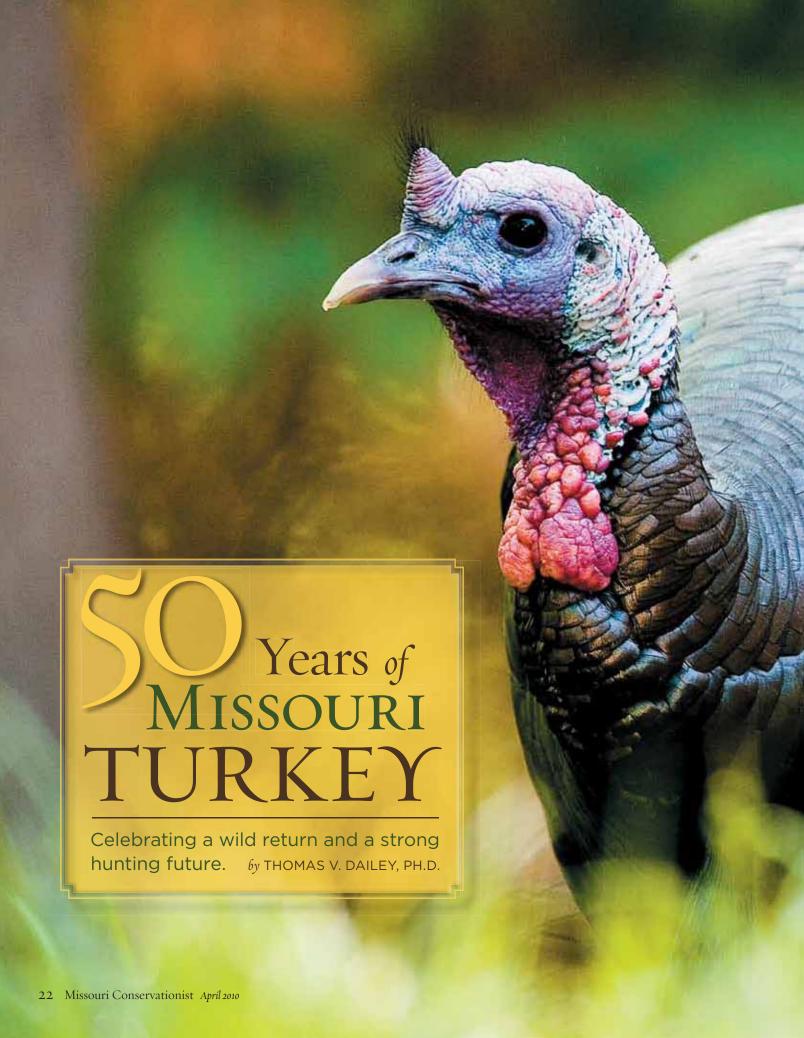
EF800mm f/5.6 lens • f/8 • 1/640 sec • ISO 800



⋖ WHITE-TAILED DEER

A white-tailed deer fawn stands in the wetland at Clarence Cannon National Wildlife Refuge in Annada. White-tailed deer, especially young ones, are always on alert. I found this fawn on a late-summer evening. To my surprise, instead of running away, the fawn approached me, trying to figure out what I was. I photographed this fawn as it raised its nose in the air, sniffing while keeping its eyes on me.

500mm f/4 lens • f/4.5 1/1600 sec • ISO 400





appy 50th anniversary Missouri turkey hunters! Last spring's hunting season marked 50 years of the annual rite that Missourians enjoy so much. Missouri's modern spring hunting began in 1960 with a three-day season in 14 counties. Six hundred ninety-eight hunters harvested 94 turkeys.

Today's seasons involve all 114 counties, more than 150,000 hunters and more than 55,000 turkeys harvested annually. Hunters even set a record this year. Archers bagged 3,298 turkeys during the fall season that ended Jan. 15.

As impressive as these numbers are, more important is the simple presence of this great bird—gobblers in the spring, poults in the summer and flocks together in the winter.

Trapping and Transplanting

The turkey revolution occurred from 1954 to 1979. Wild turkeys were trapped and transplant-

ed (translocated) to areas where the species was scarce or nonexistent. Missouri's environment was perfect for turkeys, and populations grew exponentially with birds filling the many areas of good habitat and eventually moving into marginal habitat. Led by the Department's turkey biologist, John Lewis, MDC staff worked with landowners to translocate and protect this renewed natural wonder.

Research and the Blue-Ribbon Panel

Turkeys are precious to Missourians, and this was reflected in early conservative hunting seasons, most notably the daily mid-day closure. As the population grew, more opportunity was provided—more hunting days, fall firearms and archery seasons, a youth season—and the limit was raised from one to two turkeys.

Turkey populations soared in the 1980s and 1990s, and turkey biologist Dr. Larry Vangilder, with substantial support from the National Wild Turkey Federation, embarked on research





on the life and habits of the species. Research made it clear that bolder liberalization was appropriate, and this was put into action in the 1998 Missouri Wild Turkey Harvest Management Plan.

The Plan wasn't just based on research, a Blue-Ribbon Panel convened by the Conservation Commission provided hunter input. The priority was a high-quality spring hunt, which translates to an abundance of vocal gobblers and room to hunt without interference from other hunters. Research dictated that if we are to guard against overharvest of mature gobblers, the spring season must begin after the peak in breeding activity in early April. This is a principle that both minimizes the chance of overharvest of mature gobblers, and ensures that most hens are bred, providing the young turkeys to annually replenish the population.

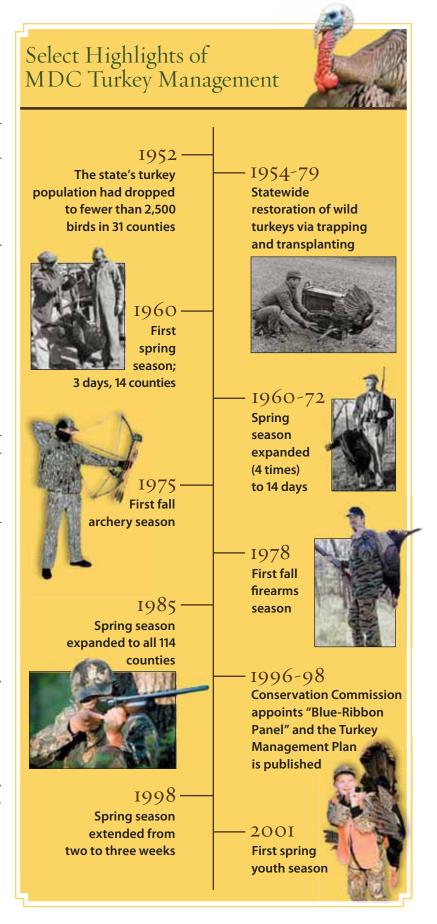
What Goes Up Must Come Down

By the 1990s turkey populations around the United States began to level out. A tenant of wildlife management is that exponential population growth is eventually curbed by predators, disease, competition for food and changes in habitat. Missouri's turkey population had reached unimaginable levels, close to a million entering autumn, and flocks of hundreds of turkeys in winter were not uncommon.

Although turkey population growth flattened in the 1990s, hunting success peaked in 2004 with a record spring harvest of 60,744. With 98 percent of these birds being males shot after the peak in breeding, this level of hunting had little or no effect on future long-term abundance. Similarly, fall harvest had fallen over the years to a small fraction of the statewide population, translating to little or no effect on long-term abundance or the quality of the spring hunt.

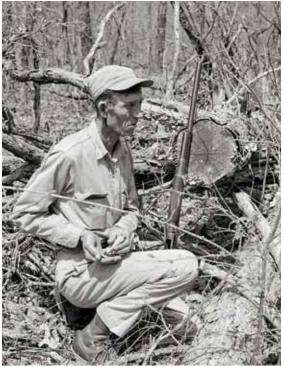
No Webbed Feet

Duck hunters are happy these days because waterfowl abundance is high. Unfortunately, our resident ground-nesting birds, turkeys, quail, greater prairie-chickens, etc., suffer major reductions in chick production when weather from April to June is overly wet or cool. These conditions can lead to drowned nests and poults, hypothermia in poults and increased predation.





Missouri's modern spring hunting began in 1960 with a three-day season in 14 counties. Today's seasons involve all 114 counties, more than 150,000 hunters and more than 55,000 turkeys harvested annually



For the past few years weather records have been broken in ways that are not conducive to producing turkey poults, including the Easter freeze of 2007, record rainfall in 2008 and overly cool, wet springs when records were not being set. The result has been a decline in turkeys, measured by a drop in harvest of more than 10,000, and an estimated drop in abundance of more than 100,000.

What's Next?

What is the next chapter of one of the greatest wildlife success stories? With all the history Missouri's turkeys, hunters and managers have been through-trapping, turkey boxes, radiotelemetry tags, hunter surveys, check stations, Telecheck, sophisticated turkey decoys, special opportunities for youth and people with disabilities and hunting seasons of all sorts—the future is most dependent on weather, something we have no control over.

Close at hand, the 2010 spring season will be challenging because poor poult production in 2007 and 2008 translates to fewer mature gobblers. On the bright side, jakes, from the 2009 hatch, will be relatively more abundant in southern Missouri because torrential rains occurred mostly in northern Missouri. We now have a population that declines or increases mainly in response to spring and summer weather conditions. A few consecutive years of drier, warmer springs is critical for our turkey population to bounce back.

Will trapping and relocating turkeys be used again to replenish populations? Translocation was an effective tool for restoring wild turkey populations to large landscapes completely void of the species. Today there are virtually no suitable areas of significant size that existing turkey populations cannot naturally expand into given favorable weather and adequate reproduction. Given the cost of translocation, it is better to simply allow nature to take its course.

In the meantime, we will continue our comprehensive and annual assessment of appropriate hunting regulations. We monitor and manage our turkey population through science-based research, citizen input and partnerships. We are partnering with the University of Missouri on cutting-edge analysis of past turkey population and harvest data and will revise the turkey management plan with this new information. The Department along with partners such as the National Wild Turkey Federation and the Conservation Federation of Missouri will continue our focus on hunting heritage. Because of strong citizen support, there is a bright future for Missouri's turkey resource.

All turkey enthusiasts have opportunities to contribute to the future of this noble bird. The Department of Conservation partners with the USDA, the National Wild Turkey Federation and other game- and non-game bird organizations to increase crucial nesting and broodrearing habitat. These habitat programs benefit all wildlife, but most importantly they provide the potential for a turkey rebound.

Although Missouri's turkey population has declined in some areas, we still have some of the best turkey hunting in the nation, and the Conservation Department and key partners intend to keep it that way. \blacktriangle

HABITAT RESTORATION

As Missouri's National Wild Turkey Federation regional biologist, one of my duties is to foster habitat restoration through grants and partnerships with a focus on many of Missouri's 38 Conservation Opportunity Areas (COAs).

In the southwest, where turkeys aren't doing well, NWTF has focused on grassland, glade and woodland restoration in Roaring River and Shoal Creek COAs. We are supplying seed drills, prescribed burning equipment, funding for cedar removal and labor for burns. On private lands, dedicated funding from local NWTF chapters has been matched by the Missouri Department of Conservation through the Bobwhite Quail Challenge Grant to provide cost-share for landowners to restore nesting and brood-rearing habitat. Bobwhite quail are the primary focus of this program, but improvements for quail are very beneficial for turkeys and many other species of wildlife.

Similar approaches are being used in the northeast portion of the state, and specifically in the Mystic Plains and Thousand Hills COAs. In the northwest, NWTF has partnered with The Nature Conservancy to assist in reclaiming 250 contiguous acres of native warm-season grass in the Grand River Grasslands COA. This will benefit greater prairie-chickens, but the periphery of this landscape will provide turkey nesting and brood-rearing habitat.

NWTF is heavily invested in collaboration; we are motivated by activities that promote our passion, more turkeys and more places to hunt them. If we can get there quicker by helping the prairie-chickens, quail, songbirds or collared lizards—even better. When you place your focus on habitat you come to realize that everyone is aiming at the same target, we're just shooting at it from different angles. Keep it focused on habitat and everybody wins!

—by John Burk, NWTF regional biologist

The Conservation Department pays a portion of the salary for this position to provide technical assistance to private landowners regarding turkey management.



The 2010 spring season will be challenging because poor poult production in 2007 and 2008 translates to fewer mature gobblers.



Underwing Moths

Hide, flash and fly is the survival strategy for one of Missouri's most spectacular insects.

UNDERWING MOTHS, WITH wingspans from 1 ½ to 3 ½ inches, are virtually invisible on tree trunks where they rest during daylight hours. Should a predator find one, the moth flashes brightly banded hindwings, startling the enemy. The predator's split second of indecision allows the moth to fly away, alighting on another tree and disappearing once again. There are more than 60 species in the state, plus 40 varieties within those species.

Underwings are in the genus Catocala (Kuh-TOC-uh-la). The Greek name translates to kato for "below," and kalos for "beautiful," a perfect description of the moth's colorful hindwings, normally concealed beneath the front wings. Besides tree trunks, the moths rest in caves, under ledges or among leaf litter on the ground. They only stir when darkness falls.

At night, underwing moths are vulnerable to attack by bats, but the moths have special organs on the thorax called tympana that allow them to detect a bat's ultrasonic cries. Hearing an approaching bat, the moth takes evasive action. Underwings are strong flyers, and they might travel several miles in a night.

Adult moths find each other mostly by smell. Resting females give off a special scent called a pheromone that the male detects with his antennae. A pair mates tail-to-tail, with their wingtips overlapping.

Female moths lay eggs on the bark of the host tree, hidden in crevices away from the beaks of birds such as nuthatches and creepers. Incubating over the winter, the eggs hatch the following spring. The caterpillars quickly outgrow their exoskeletons (skins), and must molt (shed) several times as they age.

Underwings generally fall into one of two categories: those species that feed on oaks and/or hickories as caterpillars, and those that feed on willow or poplar. There are exceptions, such as the Magdalen underwing, Catocala illecta, which feeds on honey locust. Even as caterpillars they are nocturnal. As dawn approaches they press their bodies into crevices on twigs, branches or the trunk or travel down the tree to nestle in leaf litter. Young larvae slink along, clinging tightly to twigs. Older larvae walk, or "loop" like inchworms. They match perfectly the bark of twigs and branches where they rest motionless during the day. Some even have fringe-like growths on their sides that break up the outline of their bodies. A few species rest openly on leaves and, if discovered, thrash about violently, propelling themselves to safety or startling their attacker.

Eventually, the larva transforms into the next stage: the pupa. Underwing caterpillars do not spin cocoons but will lash together a few fallen leaves. The silk is spun from glands in the insect's lower lip. Inside the pupal case, a dramatic internal reorganization of the insect takes place. About three or four weeks later, an adult moth emerges.

Seeking the elusive underwing moths, and their caterpillars, can be a rewarding experience for nature-lovers of all ages. The Conservation Department's Butterflies and Moths of Missouri guidebook is a good starting point for learning more about Missouri's moths. It is available for \$18 plus shipping and handling, and sales tax (where applicable) by calling toll free 877-521-8632 or visiting www.mdcNatureShop.com or at conservation nature centers statewide.

-Eric R. Eaton, photo by Donna Brunet







Pea Ridge CA

Celebrate spring's return at this large, deeply forested area southwest of St. Louis.



APRIL IS A great time to enjoy a variety of outdoor activities at Pea Ridge Conservation Area in northwest Washington County. This large, diverse area atop karst topography will be starting to glow with flowering spring trees and shrubs and twittering with early returning migrant songbirds. Aside from taking in spring's attractions, visitors can

also camp and fish as well as hunt during designated seasons.

Totaling 8,389 acres, Pea Ridge includes four tracts of land scattered across several different routes between Sullivan and Potosi. The 5,470-acre main tract on Highway 185 is composed of oak, hickory and pine. Managers use a variety of techniques to maintain the area's many types of wildlife habitat, which include riparian corridors, fields, savannas and glades. An unsual type of wetland called a fen lies in a remote part of the area.

The main tract also includes three springs, a sinkhole, a dolomite (type of limestone common in Missouri) cliff, 11 dolomite glades and more than 3 miles of Indian Creek, an Ozark headwater stream. Moisture-loving plants, such as wild hydrangea, common fragile fern, pawpaw, basswood and wild ginger, grow at the base of the dolomite cliff. In the summer, visitors will enjoy seeing drought-tolerant plants, such as little bluestem, side-oats grama grass, Missouri black-eyed Susan and pale purple coneflower growing on the dolomite glades.

In April, the area puts on its spring finery of white dogwood, shadbush and lowbush blueberry blossoms, pink redbuds and tender, golden-green tree leaves. Birders will welcome the early returning migrant songbirds, including such species as Louisiana waterthrush, pine warbler, yellow-rumped warbler, ruby-crowned kinglet, hermit thrush and winter wrens.

Although there are no designated hiking trails, visitors can walk along access roads leading to the area's many parking lots. Northwest of the parking area on Indian Creek are designated seasonal (from Sept. 15 to May 15) primitive campsites. Other designated primitive campsites on the area are open during firearms deer season.

The area is open to hunting under statewide regulations, and hunters can pursue deer, dove, rabbit, squirrel and turkey during season. Trapping is allowed in season with a special-use permit. Although there is little fishing in the area's many small streams, anglers will find a fair population of sunfish in Hi Pointe Lake.

-Bonnie Chasteen, photo by David Stonner

Recreation opportunities: Bird watching, camping, hunting and fishing **Unique features:** Karst topography, dolomite glades and bluffs and Indian Creek, which is an Ozark headwater stream

For More Information

Call 573-468-3335 or visit www.MissouriConservation.org/a4711.





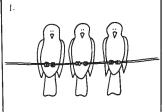
Hunting and Fishing Calendar

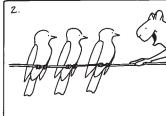
FISHING		OPEN	CLOSE				
Bullfrogs and Green Frogs		Sunset	Midnight				
		6/30/10	10/31/10				
Paddlefish Nongame Fish Snagging Trout Parks HUNTING		3/15/10 3/15/10 3/1/10 OPEN	4/30/10 5/15/10 10/31/10 CLOSE				
				Deer			
				Firea	ırms		
					Urban	10/8/10	TBA
	Youth	10/30/10	10/31/10				
	November	11/13/10	TBA				
	Antlerless	11/24/10	TBA				
	Muzzleloader	12/18/10	TBA				
Arch	ery						
		9/15/10	11/12/10				
Furbeare	rs	11/15/10	1/31/11				
Groundh	og	5/10/10	12/15/10				
Pheasant	t						
	Youth (North Zone only)	10/30/10	10/31/10				
	North Zone	11/1/10	1/15/11				
	Southern Zone	12/1/10	12/12/10				
Quail		11/1/10	1/15/11				
	Youth	10/30/10	10/31/10				
Ruffed gı	rouse	10/15/10	1/15/11				
Turkey							
Youth (resident only)		4/10/10	4/11/10				
Spring		4/19/10	5/9/10				
Fall F	Firearms	10/1/10	10/31/10				
Waterfowl please		see the <i>Waterfowl Hunting Digest</i> or					
	see www.i	see www.missouriconservation.org/7573					

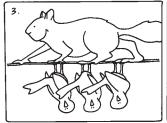
TRAPPING	OPEN	CLOSE	
Furbearers	11/15/10	1/31/11	
Otters and Muskrats	11/15/10	1/31/11	

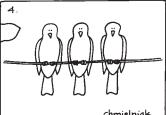
For complete information about seasons, limits, methods and restrictions, consult the Wildlife Code and the current summaries of Missouri Hunting and Trapping Regulations and Missouri Fishing Regulations, the Fall Deer and Turkey Hunting Regulations and Information, the Waterfowl Hunting Digest and the Migratory Bird Hunting Digest. For more information visit www.MissouriConservation.org/8707

The Department of Conservation's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800-392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to www.wildlifelicense.com/mo/.









Contributors



Thomas V. Dailey has served as a resource scientist for the Department since 1987. He and his wife, Sandy, and their five dogs live in Boone County. When not bird hunting, he gets out the kayak, mountain bike, turkey call and crosscountry skis for recreation, and a chain saw and drip torch for savanna restoration.

JIM LOW's earliest fishing memory is cane-pole fishing for crappie with his grandpa. Since then, he's fished the Atlantic and Pacific oceans, the Gulf of Mexico, Hatchet Lake in northern Saskatchewan and many places in between. He and his wife, Diane, spend their anniversary at one of Missouri's trout parks each year.





NOPPADOL PAOTHONG discovered his passion for wildlife photography in college in 1995. Born in Thailand, he came to the U.S. in 1993 to study graphic arts before switching to journalism. When not traveling and photographing, he enjoys time at home cooking. He, his wife, and their two golden retrievers live in Columbia.

What is it?

Spiderwort

On the back cover and right is spiderwort (Tradescantia ohiensis) by Noppadol Paothong. It blooms from April through July. It grows statewide except in extreme northwestern and southeastern sections. It can be found in a variety of habitats from prairies to old fields and woodland edges. To learn more about native plants in Missouri, visit www.grow native.org. The Grow Native program helps protect and restore our state's biodiversity by increasing conservation awareness of native plants and their effective use.



AGENT NOTES

Protecting our wildlife from commercialization

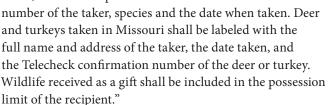
AGENTS ROUTINELY INVESTIGATE illegal commercialization of Missouri's wildlife. An example of such would be poachers taking paddlefish illegally to sell their eggs for caviar or employers illegally paying their employees with venison in exchange for their work. These types of violations are just a few examples of the illegal commercialization of wildlife. In the early 1900s commercialization of wildlife almost eliminated Missouri's deer and turkey populations. As a result, conservation-focused citizens created the Missouri Department of Conservation in 1936 and ultimately the Wildlife Code of Missouri.

Although it is unlawful to sell, buy or barter the meat

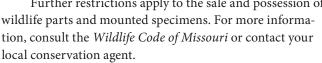


of wildlife in Missouri, one can give away legally taken wildlife as provided in Rule 3 CSR 10-4.136 Giving Away Wildlife:

"Wildlife legally taken and possessed may be given to another only by the taker after completion of the day's fishing or hunt. Any wildlife given to another shall continue to be included in the daily limit of the taker for the day when taken. Wildlife, except deer and turkevs taken in Missouri. shall be labeled with the full name, address and permit



Further restrictions apply to the sale and possession of wildlife parts and mounted specimens. For more information, consult the Wildlife Code of Missouri or contact your



Dan Akin is the conservation agent for Stone County. If you would like to contact the agent for your county, phone your regional Conservation office listed on Page 3.

WHAT IS IT?

Our photographers have been busy exploring the intricacies of the Missouri outdoors. See if you can guess this month's natural wonder. The answer is revealed on the inside of this back cover.



Subscribe online

www.MissouriConservation.org/15287 Free to Missouri households